

Appendix A: Developing the Strategy



The Chehalis Basin Plan for Habitat Restoration is the product of a 1½-year effort by the Technical Advisory Group (TAG), a committee comprised of a broad range of professionals and community representatives working in such fields as fisheries, forestry, wildlife, conservation, and water resources. The formation of the TAG came about through the requirements of RCW 77.85.070, in which the Conservation Commission, in consultation with local governments and tribes in the WRIAs, invited individuals with appropriate expertise to work at creating Habitat Project Lists and work schedules within WRIAs. The TAG had to accomplish this task using the Critical Pathways Methodology to ensure projects created habitat capable of sustaining healthy populations of salmon and steelhead. In addition, the TAG had to implement these projects in a logical, sequential manner.¹

Foundational to the TAG's work in developing the strategy was the early research compiled for what would become the report Salmon and Steelhead Limiting Factors: Chehalis Basin and Nearby Drainages, Water Resource Inventory Areas 22 and 23 (Smith and Wenger, 2001). Limiting factors are those conditions that limit the ability of habitat to fully sustain populations of salmon.² The contents of this report listed known limiting factors within 34 subbasins within the two WRIAs, as well as noting significant gaps in information necessary for assessing the health of a subbasin to support healthy populations of salmon.

The TAG's first step at developing the strategy was to develop a technically based process for evaluating the strength of each subbasin in the WRIAs to fully sustain populations of salmon. The intent of the group at this step was to find a standard that eventually would allow them to make objective comparisons between subbasins. Upon finding the comparative standard, the group could use it to rank or prioritize each subbasin as to its ability to meet the goals in this plan.

¹ RCW 77.85.070(3)

² RCW 77.85.010(5)

This process began with the group brainstorming twelve different attributes or factors influencing a watershed's ability to fully sustain salmon populations. These included:

- Access
- Minimum and maximum flows
- Fish stocks, status, abundance, and presence
- Data availability and needs
- Relative health or degradation of subbasin
- Riparian conditions
- Potential for partnership
- Sedimentation
- Habitat complexity
- Land use impacts
- Water quality

Group members next worked in teams to investigate the usefulness of using each attribute for subbasin comparison purposes. Each team was responsible for finding as many quantifiable measures as possible for each attribute. For example, some of the quantifiable measures "sedimentation" were: road density; DNR and US Forest Service mass wasting potential; sediment delivery rates; bank erosion data; gravel recruitment; and permit review.

However, the TAG soon became acutely aware of the uneven availability of quantitative data for subbasins throughout the WRIAs. In the example above for sedimentation, data was available for some subbasins and not others. This forced the group to decide that whatever data set they would use for comparative purposes had to be available for at least most, preferably all, of the subbasins in WRIAs 22 and 23. In addition, the data would have to be specific to the drainage it represented; that is, it would not be acceptable to use data modeled from another subbasin. Last of all, it was important that the data set be relational to the plan goals.

The only attribute that eventually passed these filters was "fish stocks, status, abundance, and presence". Within this attribute, there were two quantifiable measures with WRIA-wide data: the number of anadromous fish stocks and the number of anadromous fish miles. Data on the number of anadromous fish stocks throughout WRIAs 22 and 23 was readily available through the Salmon and Steelhead Stock Inventory (SASSI).³ SASSI identified seven different stocks of salmon and steelhead throughout the two WRIAs and listed how many of the stocks appeared in

³ "Washington State Salmon and Steelhead Stock Inventory", Washington Dept. Fisheries, Washington Dept. Wildlife, and Western Washington Indian Tribes. 1993 and 1994.

each subbasin.

The number of anadromous fish miles represents the linear miles of habitat in a subbasin capable of producing salmon. The source for this data came from GIS information within the Salmon and Steelhead Limiting Factors report that showed known salmon and steelhead habitat.

To use these quantifiable measures in a prioritization scheme, the TAG assigned a point system for each one. The point system favored subbasins that best reflect the plan goals; that is, productive subbasins that currently display the highest diversity in salmon stocks or the greatest quantity of salmon habitat. Table 2 displays each quantifiable measure and how the TAG distributed the points.

Table 2: Quantifiable Measures and Points Awarded

Quantifiable Measure		Points
Number of anadromous fish stocks:		
• Four-to-five stocks		6
• Two-to-three stocks		4
• 1 or less stocks		2
Number of anadromous fish miles:		
• >70 known miles		6
• 20-to-69 known miles		4
• <20 known miles		2

Adding the assigned points together for each subbasin revealed a high, medium, and low priority hierarchy between subbasins in their ability to achieve plan goals. The TAG decided that “high priority” subbasins had a score of 12. Subbasins scoring eight to ten points received a “medium priority” while subbasins scoring six or less received a “low priority”. Table 1 in Part I shows the results of applying the point system to the subbasins.

With the inter-subbasin prioritization complete, the next step for the TAG was to develop a system that would prioritize future project actions within each subbasin. Having such a system in place would give a Technical Review Team (TRT) an ability to evaluate future project proposals on its technical merits of meeting the overall goal. It would also assist groups in choosing and designing projects that met specific needs.

The Salmon and Steelhead Limiting Factors report was again instrumental in helping the TAG complete this task. The group noted that the report identified and assessed habitat conditions within each subbasin that influence its capacity to support healthy salmon populations. For working ease, the group condensed these habitat conditions into eight broad limiting factor categories: fish passage, floodplain conditions, sediment, large woody debris, riparian, water quality, water quantity, and biological process.

The TAG surmised that future project habitat lists addressing the needs of these habitat conditions in individual subbasins would likely include activities that:

- Overcome limiting factors (Restoration Actions),
- Prevent a limiting factor from happening (Preservation Actions), and/or
- Collect missing assessment information (Data Gap Actions).

The TAG concluded that it would be an impossible task, given current resources and time, to create a thorough, detailed list of projects for each habitat condition in every subbasin. Instead, the group focused on creating very general Restoration, Preservation, and/or Data Gap Actions under each habitat condition. These actions are focused objectives rather than projects; that is, specific intermediate steps to measure and evaluate the progress of future projects in achieving the overall goal. By providing guidance in this way, prospective project planners can look at any subbasin and see a list of objectives by habitat condition that will help them in designing an effective project. Likewise, the TRT evaluates all projects in light of their ability to meet the objective before recommending it for inclusion on the habitat project list.

It is important to note that the TAG views the development process for the Chehalis Basin Habitat Restoration Plan as an evolutionary one. The TAG anticipates that as information resources grow for the WRIAs by steadily completing Data Gap Actions, the strategy itself will assume a more sophisticated system of inter-basin comparisons and intra-basin objectives. Therefore, the TAG intends to meet annually to evaluate whether amendments are necessary to the strategy or prioritization processes.